

A “One Medicine” Approach to Influenza Preparedness

A North Carolina Perspective

One Medicine Symposium

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Presentation Overview

- Evolution of “One Health” concept between NCDA&CS, DPH, industry, and others
- History of state level “One Health” preparedness activities
- AI/Human Health Task Force as a model for collaborative influenza preparedness
- (p)H1N1 plan update

Core Principles

- ❖ Surveillance in all species is the foundation of pandemic influenza preparedness
- ❖ It is in the best interest of both public health and animal health that interspecies transmission does not occur
- ❖ NCDA prides itself on its ongoing cooperative relationship with PH and industry, enhanced through collaboration and trust, with decisions driven by science

Challenges in Integrated Disease Response

- Prior to 2001, the State Veterinarian's field staff, diagnostic lab system, Public Health, state Emergency Management, Wildlife Resources, USDA, etc. were “stove piped” – less than ideal collaboration
- Establishment of Dept. of Homeland Security with mission of assuming some of USDA's traditional roles – “bioterrorism”

Disease Events / History

- 1999– **Hurricane Floyd**– mass mortality and secondary disease/public health impact
- 2001– **Foot and Mouth Disease** in UK– development of response plans: biomass disposal impact on PH and environment
- 2001– **9/11 World Trade Center**– increased emphasis on bioterrorism
- 2000– Confirmation of **West Nile Virus** in NC wild bird– later evolution of the Arboviral Task Force
- 2002– **LPAI H7N2** event– our first emergency disease response incident
- 2003– **BSE (Mad Cow Disease)**– first confirmed US case

Disease Events/History– cont.’d

- 2003– **Monkeypox** outbreak in the US
- 2003– **SARS**– EP Division provides facility surveillance mapping support to PH
- 2004– **E. coli 0157:H7** at state fair– coordination with PH
- 2005– **H5N1 “Bird Flu”** threat and preparedness
- 2007– **Melamine contaminated swine feed**– USDA, FDA , PH components
- 2008– **LPAI H7N7** in mixed species backyard flock
- 2009– **Novel H1N1 influenza**– human, swine, other species

Remedies / Accomplishments

- ✓ 2002, Establishment of **Emergency Programs division** within the department
- ✓ **ICS training** of division and department employees with DHHS liaison
- ✓ PH and animal industry **education and collaboration** in zoonotic disease planning

Public Health, NCDA, and Industry **Historical Collaboration**

- **PH Rapid Response Training (2007) CSTE**
- **Poultry Strike Team Trainings with industry**
- **“Operation Flock Together” –Avian Influenza functional exercise (2008)**
- **Vectorborne Disease Task Force– EEE, WNV**
- **Annual “One Medicine” Symposium**

Collaboration– cont.'d

- **PHRST teams**– MD, Epidemiologist, Industrial Hygienist, Nurse, Veterinarian, etc. Both agencies have worked to build the local relationship
- **DHHS pass through funding** to NCDA Emergency Programs division:
 - PH Liaison Veterinarian
 - PH Surveillance Veterinarian
 - FAD training, PPE, communication equipment
- **AI/Human Health Task Force**– 2005

AI/Human Health Task Force

- Created in June 2005.
- Members:
 - **NCDA&CS**– Veterinary Division, Emergency Programs
 - **Division of Public Health** – Immunization, Epidemiology, PHP&R
 - **NCSU Extension**
 - **Local Health Directors** (Burke, Cumberland, Duplin, Randolph, Wilkes, Union)
 - **Industry**

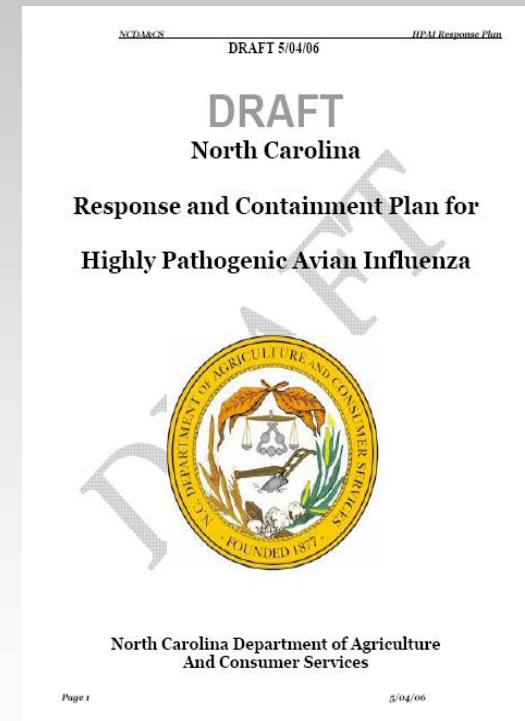


Goals of the Task Force

1. Improve communications between Ag, PH, industry & University for disease event planning and preparedness
2. Critique the NC HPAI Plan and fine tune
3. Address issues/concerns of the Poultry Industry
4. Address Responder safety and health

Action Items

1. Review of NC HPAI response and containment plan
2. Personal protective equipment
3. Seasonal flu vaccine
4. Anti-influenza medications





Pandemic Flu Taskforce Leadership

Poultry Strike Team Training



Trainings in North Carolina by NCDA&CS

- Poultry Strike Team Training
 - 2006 (4), 2007 (2)
 - 2008 (2), 2009 (2)

Response plan review, PPE methods, AI sampling procedures, depopulation techniques

- Participants:
 - NCDA&CS, NCSU, USDA, military, industry, local EM, PH, others
 - 90 outside participants (some repeats)

NCDA&CS' Principles of an Effective Disease Response

1. Data and information from which to make **informed, scientifically based** decisions
2. Established and exercised response plans and Incident Command Structure (ICS)
3. Accurate laboratory data with rapid turn around time– NCVDLS, SLPH, NVSL, CDC
4. Preexisting working relationships
5. Subject matter expertise– lab and ICS level
6. Seamless communication and cooperation

Pre- Existing Working Relationships

- USDA, APHIS, NVSL, NAHLN
- Industry
- State Public Health
- State Emergency Management, DENR, Wildlife Resources Commission
- Private veterinary practitioners, CVM
- Cooperative Extension, others

(p)H1N1 Planning

- Meetings with industry (May 7, June 18)– surveillance and vaccination data gathering, plan development, employee vaccination and PPE procedures
- NC DPH conference calls– NCDA invited and participates
- Weekly USDA/CDC/State Veterinarian/NASPHV conference calls
- NCDA industry partners conference call (May 6)

Industry/ DPH Coordination Meeting

July 24, 2009

- 17 attendees: NC Pork Council representatives; Dr.'s Engel, Moore, Williams, et al; NCDA&CS (Vet, EP, laboratory); 3 swine industry veterinarians
- Discussion items:
 - Industry overview, integrated flow, biosecurity, vaccination
 - Worker seasonal vaccination compliance
 - Response plan updates, human surveillance incorporation
- **“If it behaves like seasonal swine flu, the response will be seasonal”**
- **DHHS’ primary role will be human/worker monitoring, and look to NCDA for lead agency role in swine infections**

Fair/Exhibition (p)H1N1 Mitigation

- Aedin's Law in place since 2005, providing an existing public health framework for contact exhibits– hand washing, signage, etc.
- No swine contact exhibits permitted for the SF and MSF
- Twice daily observation of swine for clinical signs by NCDA or NCSU–CVM veterinarians at the SF and MSF
- Gratis vaccination of all MSF exhibition swine with commercially prepared influenza vaccine
- Joint DHHS and NCDA approved signage

ATTENTION

**Our animals are
HEALTHY.
ARE YOU?**

IF YOU ARE SICK or have been
in the last 7 days,
PLEASE DO NOT ENTER
the barn area.



Steve Troxler, Commissioner



Lanier M. Cansler,
Secretary of the Department of
Health and Human Services

Response

- USDA–APHIS, State Animal Health Official (SAHO), PH, and industry approved response plan.
- Pigs with clinical signs will remain at their location until signs have resolved or movement is approved by the SAHO (enhanced biosecurity)
- Recovered pigs may move normally through the production system and to slaughter (packer acceptance?)

Public Health Response

- USDA has briefed CDC and State Public Health
 - Communication/talking points have been agreed upon
 - CDC Influenza Branch has stated response plan is appropriate – HOWEVER, they are not satisfied with current level of surveillance
- Working with State Public Health Veterinarians to develop guidance on handling people associated with positive herds
 - Likely brief questionnaire, potential sampling of workers with ILI



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